

REMARKS

Applicant and Applicants' attorney express appreciation to the Examiner for the courtesies extended during the recent interview held on February 10, 2005. The amendments and arguments presented in this paper are consistent with the proposed amendments and arguments discussed during the Interview. Claims 1-3, 5-9, 22-30, 37-49, and 51-62 are pending, of which claim 1 is an independent method claim, claim 22 is an independent device claim, and claims 48 and 56 are independent system claims. As indicated above, claims 1, 2, 3, 5, 22, 40, 48, 51, and 56 have been amended and claims 4 and 50 have been canceled without prejudice by this paper.¹

The Office Action rejected all pending claims under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,014,129 to Umeda et al. ("*Umeda*") in view of U.S. Patent No. 5,280,275 to Kaplan ("*Kaplan*").²

Applicants' invention, as claimed for example in independent method claim 1, relates to positioning a cursor on a display screen. The method includes: emitting a signal from a first location to a remote control device at a second location, wherein the signal has an incident direction at the second location; receiving from the remote control device, data corresponding to an angular displacement between the incident direction of the emitted signal and at least one selected axis of the remote control device; using one or more mapping functions or rules to map the received data corresponding to angular displacement of the remote control device into movement of the cursor, wherein said mapping is dynamically modified based on (i) a particular task a user is performing, or (ii) a particular region of the display screen to which user input is directed; and positioning the cursor on the display screen in response to the mapped data.

Applicants' invention, as claimed for example in independent device claim 22, relates to a moveable remote control device for use in a display system that includes a display screen and a processor electronically connected to the display screen. The remote control device includes: receiving means for receiving an electromagnetic signal emitted from a remote location; orientation means for establishing an initial angular orientation of the remote control device, data

¹Support for the amendments to the claims can be found throughout the Specification, and particularly at page 7, beginning at line 3-6; page 20, beginning at line 20-21; and in Figures 3A-3B and 9A-9B.

²Although the prior art status of the cited art is not being challenged at this time, Applicants reserve the right to do so in the future. Accordingly, any arguments and amendments made herein should not be construed as acquiescing to any prior art status or asserted teachings of the cited art.

corresponding to the initial angular orientation being transmitted from the remote control device to the processor; first means for measuring a first component of an angular displacement of the remote control device about a first axis and relative to the initial angular orientation; second means for measuring a second component of the angular displacement of the remote control device about a second axis and with respect to the initial angular orientation, the second axis being non-parallel with the first axis; mapping means for mapping data corresponding to the first component and the second component of the angular displacement into at least cursor positioning data based on either (i) a particular task a user is performing, or (ii) a particular region of the display screen to which user input is directed; and transmitting means for sending the cursor positioning data to the processor.

Applicants' invention, as claimed for example in independent system claim 48, relates to a computer input system for generating a selected user input function on a display screen based on user interaction with a remote control device. The computer input system includes: emitter means for emitting a signal from a first location to a remote control device at a second location, wherein the signal has an incident direction at the second location; receiver means for receiving from the remote control device, data corresponding to an angular displacement between the incident direction of the emitted signal and at least one selected axis of the remote control device; mapping means for mapping the received data corresponding to angular displacement into cursor positioning data based on either (i) a particular task a user is performing, or (ii) a particular region of the display screen to which user input is directed; and processor means for generating the selected user input function on the display screen in response to the mapped data.

Likewise, Applicants' invention, as claimed for example in independent system claim 56, also relates to a computer input system for generating a selected user input function on a display screen based on user interaction with a remote control device. The computer input system includes: an emitter that emits a signal from a first location to a remote control device at a second location, wherein the signal has an incident direction at the second location; a receiver that detects data transmitted by the remote control device, wherein the received data corresponds to an angular displacement between the incident direction of the signal and at least one selected axis of the remote control device; a mapping module that comprises one or more mapping functions or rules dynamically selected and applied to the received angular displacement data when translating the received angular displacement data into cursor positioning data based on (i)

a particular task a user is performing, or (ii) a particular region of the display screen to which user input is directed; and a processor that generates the selected user input function on the display screen in response to the mapped data.

In order to establish a *prima facie* case of obviousness, "the prior art reference (or references when combined) must teach or suggest all the claim limitations." MPEP § 2143 (emphasis added). During examination, the pending claims are given their broadest reasonable interpretation, i.e., they are interpreted as broadly as their terms reasonably allow, consistent with the specification. MPEP §§ 2111 & 2111.01.

Umeda discloses a remote control that detects the inclination of a reference light source and a light receiving section to command a cursor on a screen. Col. 2, ll. 47-55. A detection section includes an iris portion to make the reference light a spot light and detect movement of the spot light toward an x-axis direction and a y-axis direction, where the optical axis is defined as the z-axis. Col. 3, ll. 1-18.

Kaplan discloses a graphical control button for a graphical scale to enable users to convey scalar information by controlling the region of the control button on which the cursor is positioned. Abstract; Fig. 4. Once the button is displayed, the computer system waits for a user key press, at which time the current position of the cursor is found through conventional means. Col. 3, ll. 37-46; Fig. 2. When the cursor is on the button, the cursor location must be mapped to a control value for the button. Col. 3, ll. 1-14 & 49-51.

Among other things, however, in conjunction with the other claim limitations, *Umeda* and *Kaplan* fail to teach or suggest one or more mapping functions or rules to map received data corresponding to angular displacement of a remote control device into movement of a cursor, wherein said mapping is dynamically modified based on (i) a particular task a user is performing, or (ii) a particular region of the display screen to which user input is directed, as recited in independent method claim 1; mapping means for mapping data corresponding to a first component and a second component of angular displacement into at least cursor positioning data based on either (i) a particular task a user is performing, or (ii) a particular region of the display screen to which user input is directed, as recited in independent device claim 22; mapping means for mapping received data corresponding to angular displacement into cursor positioning data based on either (i) a particular task a user is performing, or (ii) a particular region of the display screen to which user input is directed, as recited in independent system claim 48; or a mapping

module that comprises one or more mapping functions or rules dynamically selected and applied to the received angular displacement data when translating the received angular displacement data into cursor positioning data based on (i) a particular task a user is performing, or (ii) a particular region of the display screen to which user input is directed, as recited in independent system claim 56.

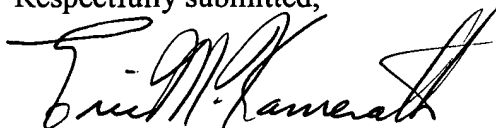
The Examiner seemed to concur with this analysis during the Interview and noted in the Interview Summary that the proposed amendments appear to be productive in distinguishing over the cited art of record and that upon receiving Applicants' formal response the Examiner will determine if the claims require further search in light of the amendments.

Based on at least the foregoing reasons, therefore, Applicants respectfully submit that the cited art fails to anticipate or make obvious Applicants' invention, as claimed, for example, in independent claims 1, 22, 48, and 56. Applicants note for the record that the other rejections and assertions of record with respect to the independent and dependent claims are now moot, and therefore need not be addressed individually. Accordingly, Applicants do not acquiesce to any assertions in the Office Action that are not specifically addressed above, and hereby reserve the right to challenge those assertions in the future, including the official notice taken by the Examiner, if necessary or desired.

In the event that the Examiner finds any remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney.

Dated this 23rd day of February, 2005.

Respectfully submitted,



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